NEW ENGLAND FARMER.

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CATTLE SHOW,

Exhibition of Manufactures, Ploughing Match, and Public Sale of Animals and Manufactures, at Brighton, Mass. on Wednesday and Thursday, the 9th and 10th of October, 1822, to commence at 9 o'clock, A. M. on each day.

THE Trustees of the Massachusetts Society, for the Promotion of Agriculture, encouraged by the patronage of the Legislature of this State, intend to offer in Premiums, not only the sum granted by the Government for that purpose, but also the whole amount of the income of their own funds. They, therefore, announce to the public, their wish to have a CATTLE SHOW, and EXHIBITION OF MANUFACTURES, &c. &c. at Brighton, on *Wednesday* and *Thursday, the 9th and 10th of October*, 1822; and they offer the following PREMIUMS:

FOR STOCK.

For the best Bull, raised in Massachusetts, above one year old $30
For the next best do. do. 20
For the best Bull Calf, from 5 to 12 months old 15
For the next best do. do. 8
For the best Cow, not less than three years old 30
For the next best do. do. 20
For the next best do. do. 15
For the best Heifer, from one to three years old, with or without calf 15
For the next best do. do. 10
For the best Ox, fitted for slaughter, regard to be had to the mode and expense of fatting 40
For the next best do. do. 30
For the next best do. do. 20
For the best pair of Working Cattle 30
For the next best do. do. 25
For the next best do. do. 20
For the next best do. do. 15
For the next best do. do. 10
For the best pair of Spayed Heifers, not less than one year old 25
For the best Spayed Sows, not less than four in number, and not less than five months old 20

The claimant to be entitled to either of these two last premiums, must state the mode of operation and treatment, in a manner satisfactory to the Trustees.

For the best Merino Wethers, not less than six in number, having respect to form and fleece 20
For the next best do. do. do. 10
For the best Native Wethers, not less than six in number do. 10
For the next best do. do. do. 5
For the best Merino Ram, do. 15
For the next best do. 10
For the best Merino Ewes, not less than five in number, do. 20
For the next best do. do. do. 10
For the best Boar, not exceeding two years old 10
For the next best do. do. do. 5
For the best Sow 10
For the next best do. 5
For the best Pigs, not less than two in number, nor less than four months old, nor more than eight 10
For the next best do. do. 5

None of the above animals will be entitled to premiums, unless they are *wholly bred* in the State of Massachusetts.

For the best Ram which shall be imported into this State, after this advertisement, and before the 15th day of October next, of the improved Leicester breed of long woolled sheep, or of the best Dishley breed, or of the fine, and long woolled sheep of the Netherlands, the length and fineness of whose wool shall be found superior to those of our present breeds, $50, or a gold medal of that value, at the option of the importer.
For the next best do. do. 50
For the best Ewe, of any of the said breeds imported under the same terms, and for the like superior qualities 40
For the next best do. do. 30

No animal, for which to any owner one premium shall have been awarded, shall be considered a subject for any future premium of the Society, except it be for an entirely distinct premium or for qualities different from those for which the former premium was awarded.

Any of the above Stock, when raised and still owned at the time of the exhibition, by the person who raised them, will entitle the claimant to an allowance of ten per cent. in addition. But Sheep, to be entitled to any of the above premiums, must be raised by the person entering them.

FOR AGRICULTURAL EXPERIMENTS.

To the person who shall raise the greatest quantity of Indian Corn on an acre, not less than seventy bushels $30
To the person who shall make the most satisfactory experiment, to ascertain the best mode of raising Indian Corn, in hills, in rows, or in ridges; not less than half an acre being employed in each mode, in the same field, the quantity and quality both of land and manure to be equal and uniform in each mode; all to receive a cultivation requisite to produce a good crop 30
To the person who shall raise the greatest quantity of Carrots on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of Potatoes on an acre, not less than five hundred bushels 20
To the person who shall raise the greatest quantity of common Beets on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of Parsnips on an acre, not less than four hundred bushels 20
To the person who shall raise the greatest quantity of Mangel Wurtzel on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of Ruta Baga on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of common Turnips on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of common Turnips, after any other crop in the same season, being not less than four hundred and fifty bushels 20
To the person who shall raise the greatest quantity of Onions on an acre, not less than six hundred bushels 20
To the person who shall raise the greatest quantity of Cabbages on an acre, not less than 25 tons weight 20
To the person who shall introduce any Grass, not before cultivated in this State, and prove, by actual experiment, and produce satisfactory evidence of its superiority in any one quality, to any now cultivated 30
To the person who shall give satisfactory evidence on 'Soiling Cattle,' not less than six in number, and through the whole season, together with a particular account of the food given, and how cultivated 30
To the person who shall make the experiment of turning in green crops as a manure, on a tract not less than one acre, and prove its utility and cheapness, giving a particular account of the process and its result 30
To the person who shall, by actual experiment, prove the best season and modes of laying down lands to grass, whether spring, summer or fall seeding be preferable, and with or without grain on different soils 30
To the person who shall raise the greatest quantity of dry Peas on an acre, not less than thirty bushels 20
To the person who shall raise the greatest quantity of dry Beans on an acre 20
To the person who shall give proof of having produced the largest quantity of dressed Flax, raised on an half acre 20
To the person who shall take up in the season, on his own farm, the greatest quantity of good Honey, and shall at the same time exhibit superior skill in the management of Bees 10
For the best Cheese, *not less* than one year old, and not less in quantity than 100 pounds 10
For the next best do. do. 5
For the best Cheese *less* than one year old 10
For the next best do. do. 5
To the person who shall raise the greatest quantity of Vegetables, grain, peas and beans excepted, for winter consumption, of the stock on his own farm, and not for sale, in proportion to the size of the farm and stock kept, having regard to the respective value of said vegetables as food, stating the expense of raising the same, and the best mode of preserving the same thro' the winter 30
To the person who shall raise the greatest quantity of winter Wheat on an acre 30
To the person who shall raise the greatest quantity of spring Wheat on an acre 30
To the person who shall prove to the satisfaction of the Trustees, that this mode of rearing, feeding and fattening neat cattle is best 20
For the best Butter, not less than fifty pounds 10
For the second best do. do. 5
For the best Sole Leather, not less than five sides 10
For the second best do. do. 5
For the best dressed Calve Skins, not less than twelve in number 10
For the second best do. do. 5
For the best five barrels of superfine Flour, manufactured in the State of Massachusetts, from wheat raised in this state 25
For the greatest quantity of Butter and Cheese, made between the 15th of May, and the 1st of October, from not less than four Cows, the quality of the Butter and Cheese, and the number of Cows to be taken into consideration, and specimens to be exhibited at the Show, of not less than twenty pounds of each, and the mode of feeding, if any thing besides pasture was used 20
To the person who shall prove by satisfactory experiments, to the satisfaction of the Trustees, the utility and comparative value of the cobs of Indian Corn, when used with or without the grain itself, ground or broken 20

To entitle himself to either of the Premiums, under this head of Agricultural Experiments, the person claiming, must cultivate a tract of at least one acre in one piece, with the plant or production for which he claims a premium, (except flax) and must state, in writing, under oath of the owner, and of one other person, (accompanied by a certificate of the measurement of the land by some sworn surveyor,) the following particulars:

1. The state and quality of the land, in the spring of 1822.

2. The product and general state of cultivation and quantity of manure, employed on it the year preceding.

3. The quantity of manure used the present year.

4. The quantity of seed used, and of Potatoes the sort.

5. The time and manner of sowing, weeding, and harvesting the crop, and the amount of the product, ascertained by actual measurement, after the whole produce, for which a premium is claimed, and the entire expense of cultivation.

And in relation to all vegetables, except Potatoes, Onions and common Turnips, the fair average weight of at least twenty bushels must be attested; and if there be hay scales in the town, in which raised, not less than three averaged cart loads must be weighed.

The claim under this head, together with the evidences of the actual product, must be delivered, free of postage, to Benjamin Guild, Esq. Assistant Recording Secretary of this Society, on or before the first day of Dec. next.—The Trustees not intending to decide upon claims under the head of Agricultural Experiments, until their meeting in December.

FOR INVENTIONS.

To the person who shall use the Drill Plough, or Machine, and apply it most successfully to the cultivation of any small Grains or Seeds, on a scale not less than one acre $20

To the person who shall invent the best Machine, for pulverizing and grinding Plaster to the fineness of twenty-five bushels per ton, and which shall require no more power than a pair of oxen or horse, to turn out two tons per day, and so portable that it can be removed from one farm to another without inconvenience 30

To the person who shall produce, at the Show, any other Agricultural Implement, of his own invention, which shall, in the opinion of the Trustees, deserve a reward, a premium not exceeding 20 dollars, according to the value of the article exhibited 20

In all cases proofs must be given of the work done by the Machine, before it is exhibited;—and of its having been used and approved by some practical farmer.

FOR FOREST TREES.

For the best plantation of White Oak Trees, not less than one acre, nor fewer than one thousand trees per acre, to be raised from the acorn, and which trees shall be in the best thriving state, on the first of September, 1823 $100

For the best Plantations of White Ash, and of Larch Trees, each of not less than one acre, nor fewer than one thousand trees per acre, to be raised from the seeds, and which trees shall be in the best thriving state, on the first of September, 1823 50

For the best Live Hedge made of either the White or Cockspur Thorn, planted in 1820, not less than one hundred rods, and which shall be in the best state in 1823 50

FOR DOMESTIC MANUFACTURES.

To the person or corporation, who shall produce the best specimen of fine Broadcloth, not less than 1 5-8 yards wide, exclusive of the list, 40 yards in quantity, and dyed in the wool $30

For the second best do. do. do. 20

For the best superfine Cassimere, not less than 3-4 yard wide, nor less than forty yards in quantity 15

For the second best do. do. do. 10

For the best superfine Sattinet, 3-4 yard wide, not less than fifty yards 10

For the second best do. do. do. 6

To the person or corporation, who shall produce the best specimen of Cotton Cloth, manufactured in this State, not less than fifty pieces 20

To the person who shall produce the best specimen of any other fabrics of Cotton, manufactured in this State, in public factories, not less than fifty pieces 20

In private families, not less than five pieces 20

FOR HOUSEHOLD MANUFACTURES.

For the best Woollen Cloth, 3-4 wide, not less than twenty yards in quantity $12

For the second best do. do. 8

For the best double milled Kersey, 3-4 yard wide, not less than twenty yards in quantity 12

For the second best do. do. 8

For the best Coating, 3-4 yard wide, and not less than twenty yards in quantity 8

For the second best do. do. 6

For the best Flannel, 7-8 yard wide, not less than forty-five yards in quantity 10

For the second best do. do. 7

For the best yard wide Carpeting, not less than thirty yards in quantity 15

For the second best do. do. 7

For the best 5-8 yard wide Stair Carpeting, not less than thirty yards in quantity 10

For the second best do. do. 7

For the best pair of Blankets, not less than 8-4 wide and 10-4 long 6

For the second best do. do. 4

For the best Woollen Knit Hose, not less than 12 pair in number 5

For the second best do. do. 3

For the best Worsted Hose, not less than twelve pair in number 5

For the second best do. do. 3

For the best Men's Half Hose, (woollen) not less than twelve pair in number 4

For the second best do. do. 2

For the best Men's Woollen Gloves, not less than twelve pair in number 5

For the second best do. do. 3

For the best Linen Diaper, 5-8 yard wide, and not less than thirty yards in quantity 5

For the second best do. do. 3

For the best 4-4 yard Diaper, (for table linen) not less than thirty yards in quantity 10

For the second best do. do. 5

For the best specimen of Sewing Silk, raised and spun in this State, of good fast colors, not less than one pound 5

For the second best do. do. 3

For the best Linen Cloth (for shirting or sheeting) one yard wide, and twenty-five yards long 8

For the second best do. do. 4

All the above Manufactures, except when of Cotton, must be of the growth and manufacture of the State of Massachusetts. And all Manufactures, when presented, must have a private mark, and any public or known mark must be completely concealed, so as not to be seen, or known by the Committee, nor must the Proprietors be present when they are examined; in default of either of these requisitions, the articles will not be deemed entitled to consideration or premium.

Animals, Manufactures, or Articles, may be offered for premium at Brighton, notwithstanding they may have received a premium from a County Agricultural Society.

It is understood that whenever, merely from a want of competition, any of the claimants may be considered entitled to the premium, under a literal construction, yet if, in the opinion of the Judges, the object so offered is not deserving of any reward, the Judges shall have a right to reject such claims. Persons to whom premiums shall be awarded, may, at their option, have an article of Plate, with suitable inscriptions, in lieu of money. Premiums will be paid within ten days after they shall be awarded.

That in any case in which a pecuniary premium is offered, the Trustees may, having regard to the circumstances of the competitor, award either one of the Society's gold or silver medals in lieu of the pecuniary premium annexed to the several articles.

That if any competitor for any of the Society's premiums shall be discovered to have used any disingenuous measures, by which the objects of the society shall have been defeated, such person shall not only forfeit the premium which may have been awarded to him, but rendered incapable of being ever after a competitor for any of the Society's premiums.

All premiums not demanded within six months after they shall have been awarded, shall be deemed as having been generously given to aid the funds of the Society.

The Trustees of the Massachusetts Society for Promoting Agriculture, hereby give notice, that they intend, on the second day of the Cattle Show, viz: on the 10th day of October next, to give premiums to the Owners and Ploughmen of the three Ploughs, to be drawn by oxen, which shall be adjudged by a competent Committee, to have performed the *best work, with the least expense of labor*, not exceeding half an acre to each plough, and of such depth as the Commtttee shall direct.

First Plough	$20	Second Plough	$12	Third Plough	$8
Ploughman	10	Ploughman	6	Ploughman	4
Driver	5	Driver	3	Driver	2

In each case, if there be no Driver, both sums to be awarded to the Ploughman.

The persons intending to contend for these Prizes, must give notice, in writing, to S. W. Pomeroy, or Gorham Parsons, Esq'rs. of *Brighton*, on or before the 2d day of October, so that proper arrangements may be made for the purpose. No person will, on any consideration, be admitted without such notice. The competitors will also be considered as agreeing to follow such rules and regulations as may be adopted by the Committee, on the subject. The ploughs to be ready to start at 9 o'clock, A. M.

The result of the last Ploughing Matches at Brighton, and the satisfaction expressed by so many of their agricultural brethren, will induce the Society to continue these premiums annually, in connexion with the Cattle Show, as an efficacious means for exciting emulation and improvement in the use and construction of the *most important instrument* of agriculture.

Persons intending to offer any species of Stock for premiums, are requested to give notice thereof, either by letter (post paid) stating the article, or to make personal application to Mr. Jonathan Winship, at *Brighton*, on or before the 8th day of October, and requesting him to enter such notice or application; so that tickets may be ready at 9 o'clock, on the 9th. No person will be considered as a competitor, who shall not have given such notice, or made such application for entry, on or before the time above specified.

All articles of manufactures must be entered and deposited in the Society's Rooms, on Monday, the 7th of October, and will be examined by the Committee on Tuesday, the 8th, the day before the Cattle Show; and no person but the Trustees shall be admitted to examine them before the Show. The articles so exhibited, must be left till after the Show, for the satisfaction of the public.

The applicants will be held to a rigid compliance with this rule relative to entries, as well as to the other rules prescribed.

The examination of every species of stock, (except working oxen) will take place on the 9th; and the trial of Working Oxen, examination of Inventions, and Ploughing Match, on the 10th of October.

The Trustees also propose to appropriate, on the second day of the Cattle Show, their Pens for the public sale of any Animals, that have been offered for premium, and also of any others, that are considered by them, as possessing fine qualities; and their Halls for the public sale of Manufactures. Both sales to take place at half past eleven o'clock, precisely. And for all Animals or Manufactures, that are intended to be sold, notice must be given to the Secretary, before 10 o'clock of the 10th. Auctioneers will be provided by the Trustees.

By order of the Trustees,

J. LOWELL,
J. PRINCE,
G. PARSONS,
E. H. DERBY, } *Committee.*

January, 1822.

From the Boston Daily Advertiser.

CONSTRUCTION OF STABLES.

Most of the horses brought into this town from the country, become soon diseased, generally in the course of the first week, and frequently in 24 or 48 hours after they are placed in our stables. It has been frequently asked what can be the cause of this sudden alteration in the health of the animal, and it has almost as frequently been answered, a change of air and of food. There is no doubt a change of food has some influence, but the effect is principally attributable to a change of air. It is not however the kind of change, that is generally supposed. It is not the bringing horses from a fresh atmosphere to a salt one, that produces the disease I allude to. It is the bringing them from a pure atmosphere, and confining them in crowded stables, where the air being vitiated by respiration, and the effluvia from animal bodies, a malignant quality, which being inhaled by horses unaccustomed to it, soon deranges the system and generates disease; and so long as our stables are constructed, as they now are, so long will our country horses be sick, when brought into them. We have all of us heard of jail fever, hospital fever, plague and typhus; and much has been said about the domestic origin of yellow fever, but what jail, hospital or prison ship; or what situation in our streets, or about our wharves, can be found, where the air is so vitiated as in a common stable? Imagine for instance 30 or 40 horses confined in a space 50 by 30 feet, and 9 feet high, (the scaffold is generally about 9 feet from the ground) surrounded by a brick wall, without windows, and no ventilators through the roof; and no outlet for the hot air, except at the doors, and those closed at night; and then consider the fact as stated by Dr. Hales, that a man cannot live in 74 cubical inches of air, one minute, without danger of suffocation. It is obvious, that a horse so situated, must breathe the same air over and over again and not only the air which has repeatedly passed through his lungs, but that which has been breathed many times by other horses, and is filled with exhalations, arising from animal secretions and excretions; and perhaps too, the planks and timbers of the very stall he stands in, may have been saturated, for years, with excrementious matter; which can emit only noxious effluvia, or what is called animal miasms.

It has been stated by a wrter of some eminence, that three thousand men confined in the compass of one acre of ground, would make an atmosphere of their own steams, seventy feet high, which would soon become pestilential, if it were not dispersed by the winds. After considering these facts, who can doubt what generates disease in horses brought into our stables from the country? The only doubt that naturally suggests itself is, how our horses get along so well as they do. After getting over their first sickness, or seasoning as it is called, (which requires more or less time, according to the constitution of the horse, and the stable in which he is placed) they go on tolerably well. Their constitutions become assimilated to their situation, as to the air which they breathe, and its effects are not so injurious; in the same manner as a man, may become so accustomed from habit, to the use of tobacco, opium, and arsenic, that they will not make him sick, yet none will say, that these are not injurious to the human constitution; and I believe few will say, when the subject is properly understood, that the air in our stables is not equally so to the animal.

In making these remarks, I have but one motive, which is to draw the attention of the public to this subject, in hopes that an alteration in the construction of our stables may be the consequence. We have many excellent buildings in this town, occupied as stables, and with a few alterations, they might be made very healthy and comfortable dwellings for horses.

In constructing a stable, the first object ought to be a proper system of ventilation. This may be effected in the following way. Let a hole 3 by 4 inches be knocked through the brick wall, immediately above the head of each horse, and another of the same dimensions opposite to it, and parallel with the floor of the stall. This will occassion a perfect and constant ventilation. As it is the property of hot air to ascend, every time the horse makes an expiration, the air expelled from his lungs, being more rare than the surrounding atmosphere, will go out at the upper hole, and a corresponding quantity of pure air will come in at the lower hole.

No danger is to be apprehended from cold air coming in at the uper hole, upon the head of the horse, as the current will constantly be turned upwards. The rarified and unwholesome air will escape at the uper hole, and the wholsome air will come in at the lower.

As some stables may be so situated, as to render this method of ventilation impracticable, I would recommend, where this is the case, that one, two, three or four openings be made through the roof. The number ought to be in proportion to the length and size of the stable. This may be done in the following way. Let a hole be cut through the scaffold about 3 feet square, and another directly over it, through the roof, about 2 feet square, and let a box be inserted, open at each end, of a shape and size, to correspond to these two openings, and sufficiently long to extend from the under side of the scaffold, through the roof. Then let holes be cut through the doors, or through some convenient parts of the stable, on a parellel with the floor, of equal number and dimensions, as those through the roof. By this method a regular and systematic ventilation will be produced. If any one doubts the justness of these remarks, and believes that our present method of stabling a good one, and that horses ought to be kept in a hot air, and covered up with woolen blankets, let him try the experiment upon himself; let him sleep in a heated room, with ten or fifteen others, covered up with clothes, sweat it out for the night, and try the condition he will be in for any kind of employment whatever.

I cannot refrain here from making one or two remarks upon the very common, but very absurd practice of blanketing horses in the stable, though this is a subject which more properly belongs to the management of horses than the construction of stables.

It must be obvious to every one, who reflects at all upon this subject, that if a horse requires one blanket in a warm stable, he ought to have two when he goes out in a cold storm. Instead of this, when the horse is taken from the stall, his blanket is thrown off, and he is exposed perhaps for the day to the inclemency of the weather, and frequently without much exercise to counteract the effects of cold. Even the constitution of a horse cannot withstand this treatment. He soon becomes infirm, decrepit, and broken down. His usefulness is diminished and his life shortened by this kind of management.

From the Rhode Island American.

FARMERS—ATTEND.

James Sisson, Esq. who lives at Warren Neck, about three miles from the village of Warren, is well known to the public as an enterprising Agriculturist. He is always seeking improvements in what is most useful to his fellow-citizens, viz. Orchards, the introduction of new kinds of Grain, the best mode of cultivating his farm, &c. He imported from Bremen, in November, 1820, two pairs of the largest kind of Geese, supposed to be the largest in the world, weighing when fatted, 20 pounds, and, it is confidently asserted, some weigh 30 pounds. At first he was rather discouraged, as they would not eat Indian corn, and the spring following they sat early and both Geese reared but one to maturity. That one, however, this spring, brought off two litters, and the two old pairs each brought up a litter; he now has 17 young and 5 old ones, all perfectly white and healthy, and of full size. They feed and set as well as any of our common Geese; the young come off healthy and strong, and yield about double the quantity of feathers. I was at his farm, a few days since, and was highly gratified in viewing on the lawn directly in front of the house, two beautiful flocks of snowy whiteness (he has the common geese, feeding near them, and they resemble ducks in point of size) and I have no hesitation in recommending to the farmers of New-England that they introduce this valuable breed of poultry into their barn yards. Mr. Sisson will dispose of a few pairs, if applied for soon, and the opportunity ought not to be neglected.

A Friend to Agriculture.

New Covering for Floors.—A new material has been introduced and is becoming fashionable in Philadelphia as a covering for floors. It is made of paper, is said to be very handsome, as it may be fashioned in a great variety of patterns, is quite durable, and is only one quarter as expensive as Carpets or Oil Cloth.

FACTS AND OBSERVATIONS RELATING TO

AGRICULTURE & DOMESTIC ECONOMY.

WORKING BULLS.

"The bull is naturally vicious, and often becomes so mischievous as to endanger many valuable lives; an evil which we conceive might be remedied by training him to labor. For, being the only beast of his size which is indulged in idleness, and as he possesses equal strength with the ox, we doubt not, but if he were properly worked, and allowed to indulge his desires during the breeding season, he would, by being inured to labor and attended by mankind become gradually tame, and harmless, as the horse, or any other naturally vicious animal. Several experiments, indeed, have been made for this purpose; and from their successful result, we think the practice of working bulls may be advantageously adopted; especially as these animals are not only broken in with little difficulty, and work well, but also because they recover from fatigue much sooner than an ox."—*Complete Grazier.*

REMEDY AGAINST ANTS AND SPIDERS.

Mr. Clutterbuc, Jr. of Watford, washed the walls of his hot-house with a painter's brush, dipped in a solution made of four ounces of corrosive sublimate, in two gallons of water; and since that application, neither the red spider, against which this remedy was employed, nor ants have made their appearance.

Domestic Encyclopedia.

CRICKETS.

An easy method of destroying crickets is to place phials half full of beer, or any other liquid near their holes, whence they will crawl into them and cannot escape. Cats are very fond of crickets; but the great quantities they consume often occasion their death. Hence it is more advisable to destroy these insects either by pouring hot water into the holes through which they retreat, or exposing boiled peas or carrots, mashed up with quick-silver, in places which they frequent. Another mode of exterminating them, consists in placing pea straw near their habitations, and then immersing them in water, together with this straw, to which they are peculiarly attached.—*ibid.*

REMEDY AGAINST VERMIN WHICH INFEST SWINE.

Mr. Joseph W. Ballard, of Mount Pleasant, Isle of Wight County, Virginia, directs, in cases where hogs are infested with vermin, to take "a little tar, and grease of any kind sufficient to make the tar quite thin, then pour it over the hogs, when fed, sufficiently so as to have them quite smeared with the tar; this may be repeated often in the summer and fall, as I conceive it to be an excellent thing for the health of the hogs—or in good weather you may give to each hog a small table spoonful of sulphur in their food, or in damp weather have them well sprinkled with strong wood ashes; either of these remedies will prevent or destroy the vermin."—*American Farmer.*

SPENT TAN OR TANNER'S WASTE.

This substance is, we believe, valuable for agricultural purposes, and have therefore been sorry to see a great deal of it accumulating in useless piles about tanner's yards, and scattered about highways and commons. It is probable, however, that if it is employed as a manure in a crude state, it may not prove immediately useful. It would be likely to retain something of the *gallic acid*, which is we believe unfriendly to vegetation. This acid, however, may easily be neutralized by mixing with the bark a quantity of quick lime.

The *Complete Grazier* informs us that "*Oak bark*, or, (more correctly speaking,) *tanner's waste*, may be accumulated into small heaps, and mixed with lime and a sufficient degree of water to keep it moist, and promote its decomposition and putrefaction. It is an excellent manure for cold stiff soils, whether arable or grass lands; but for the latter it should be made to approach the nature of vegetable mould as much as possible. The best time of spreading it on grass lands is shortly after Michaelmas, (beginning of October) that the winter rains may wash it into the ground; as, if it be applied in the spring it will burn the grass, and exhaust rather than improve the soil for that season."

It has been said that if boxes are made round peach trees about one foot in height, to hold about a peck, and these filled with the bark taken from tan vats, pressed a little together, the trees will remain free from worms about their roots, which often prove fatal to them. Spent tan, likewise, we have been told, will preserve fruit trees from the curculio, (a small worm which is found in perhaps one half the apples and pears raised in New England.) We apprehend, however, that if this substance is intended as a preservative against insects, it should be applied in a fresh state, and without being mixed with lime, as it is probably the acid which proves destructive to insects, and the acid would be destroyed by quick lime.—Another use of spent tan spread about the roots of fruit trees is to prevent too early vegetation in the spring, and thus the buds and blossoms escape early frosts.

WEIGHT OF SWINE.

The *Complete Grazier* gives the following rules to guard the unsuspecting purchaser against imposition in buying swine:—"When swine are fat, it appears from actual experiments that every twenty pounds of live weight will, when killed, produce from twelve to fourteen pounds clear weight. Where the hogs do not exceed twelve stone of fourteen pounds to the stone, the weight will be twelve pounds; if they be of a larger size, it will be upon an average about fourteen pounds; so that if a farmer or breeder weigh his beasts while alive, he will be enabled to ascertain the next profitable weight when dead; and likewise by weighing the hogs every week to fix the best time for disposing of them to advantage; because, as soon as an animal ceases to acquire that daily increase, which makes it beneficial to keep him, the best step that can be followed is to sell or slaughter him without delay."

MANGEL WURTZEL.

A writer in the *Farmer's Journal*, an English periodical publication of much merit, in treating of the culture of Mangel Wurtzel, observes that "Having noticed the issue of an inumerable quantity of small lateral fibres from the sides of this plant during its vegetation; considering them conductors of nutriment, and that putrescent vegetable or other matter was the best pabulum, a compost of dung and soil (prepared in autumn) was ploughed in with the wheat stubble; the succeeding ploughings, harrowings, &c. *well* mixed it with the soil. This was the largest crop I ever cultivated or have seen; which I attribute, in a great measure, to the intimately mixing the manure with the soil." "This remark," says the editor of that paper, "is doubly important, as it shews that *autumn ploughing*, and *broadcast* dunging (performed in autumn) are best for mangel wurtzel."

SCRAPINGS OF ROADS, AND MUD FROM SWAMPS, &C.

Some little knowledge of chemistry seems indispensable for the proper management of manures. A writer in the Farmer's Journal states in substance that turnips manured with scrapings from the city road, consisting chiefly of ballast ground to powder, enriched with the droppings of cattle, grew very vigorously until the bulbs should have swelled, when they all turned yellow and died, notwithstanding they were, from time to time, well watered. The same writer says, "The experiments of Mr. Malcolm prove that scrapings from gravel roads may be generally suspected of containing qualities injurious* to vegetation, although the droppings of cattle, &c. mixed therewith, give a temporary vigor to the plant. On the other hand, scrapings from chalky roads, or any calcareous stone may be very useful on suitable soils."

We have likewise known swamp-mud, apparently rich, but mixed with sulphate of iron (copperas) as was manifested by that kind of scum on the water drained from the swamp which denotes the presence of that metal) disappoint the expectations of farmers, who used it for manure. This may be easily accounted for. "Vitriolic impregnations," according to Sir Humphrey Davy, "in soils where there is no calcareous matter, are injurious, probably in consequence of their supplying an excess of ferruginous matter to the sap. Oxide of iron in small quantities forms a useful part of soils, and probably is hurtful only in acid combinations." The remedy, in such cases, is simple, and is thus pointed out by Sir Humphrey Davy. "If on washing sterile soil it is found to contain the salts of iron, or any acid matter, it may be ameliorated by the application of quick lime. A soil of good apparent texture from Lincolnshire, was put into my hands by Sir Joseph Banks, as remarkable for sterility; on examining it, I found that it contained sulphate of iron; and I offered the obvious remedy of top dressing with lime, which converts the sulphate into a manure."† The sulphuric acid of the sulphate of iron, combines with the lime and forms sulphate of lime, which is Gypsum, or Plaster of Paris.

GOOD HINTS.

The following, extracted from an Address by Mr. James Garnett, President of the Fredericksburgh Agricultural Society, delivered before that Society at an anniversary meeting, may be found well worth the attention of those whom it may concern.

"I here beg leave to offer, (although I know that I shall receive no thanks for it) a sugges-

* Probably sulphate of iron (copperas) or some other combination of acids with metals.

† Agricultural Chemistry, p. 141, Philadelphia ed.

tion to all makers of patented agricultural implements. This is to calculate well before they fix their prices, whether they could not make greater profits by selling at lower rates. I know a maker of cast iron ploughs, for instance, who, although he has considerably reduced his prices, still receives at least twenty cents per pound for them, as I have ascertained by actual weighing, when common castings, the monopoly of which is not secured by patent, sell from six to eight cents! This difference, I think, may well be called an exorbitant exaction; and to my certain knowledge it has prevented many farmers from using, notwithstanding they highly approve them. Now, although I would be one of the last men in the world to withhold liberal encouragement from new inventions, yet I must say, that some of the authors of them appear to require other restraints than those which their own consciences and our patent law afford. That any very useful discovery should enrich the man who makes it, I think all quite fair;—but his riches should result rather from the exclusive right of selling his invention, and the products thereof, than from his extravagant profits on the articles which he vends beyond what they would command if he had no monopoly."*

Extracts from an Address delivered before the Philadelphia Society for promoting Agriculture, at its annual meeting on the 15th Jan. 1822.

"It was stated two years ago by one of the Vice-Presidents of this Society, that the average crop of wheat in Lancaster county, which is considered the richest in the state, did not probably exceed fifteen bushels per acre. Now the average of all France is more than eighteen bushels—the average of all England twenty-four—and in some counties, as in Middlesex and the Lothians, forty. With regard to rents, it is not easy to speak with accuracy. If we except the alluvial meadows near this city, which rent for nine or ten dollars per acre, I should not estimate the average rent of cleared land with improvements within the district just mentioned, at more than two or three dollars. In Italy, in England, and in Scotland, lands not particularly favored by vicinity to markets, rent for from sixteen to twenty dollars, and in the neighborhood of large cities, from thirty to forty dollars.

The causes of this inferiority may be discovered in two characteristics of our farming—a disproportionate capital, and an inefficient cultivation. The first is a striking deficiency.—Agriculture, though a very common, it not, I think, a favorite pursuit in Pennsylvania. It attracts few from the other classes, and its ranks are rather thinned by desertion than recruited by volunteers. The enterprising shun it for its inactivity; the gay from its loneliness; the prudent from its unproductiveness; so that altho' a great proportion of the wealth of the state is fixed in land, an exceedingly small capital is devoted to farming. We too often exhaust our means in clearing or purchasing a farm, leaving scarcely any resources for stocking and cultivating it. Now an English farmer, with a certain capital, rents a farm, as a manufacturer rents a house, and devotes his capital to extract from it the greatest possible produce. Accordingly his proceedings seem almost incredible to the possessers of large American farms. It has become a settled maxim of English husbandry, that before occupying good arable land, a capital of from thirty to forty dollars per acre is necessary. On an estate of three hundred acres, therefore, a farmer begins by expending in preparations nine thousand dollars; and his annual disbursements in labor, manure and other articles, are about five thousand dollars a year. His operations are all on a proportionate scale. To contract to pay a rent of twenty or thirty thousand dollars; to expend in a single year on lime alone, eleven thousand dollars; to pay two thousand dollars a year for rape cake to manure turnips; to make a compost heap costing four thousand dollars; such are the combinations of wealth and skill to produce good husbandry.—These we cannot, and we need not imitate. But they may teach us that we should measure our enterprises by our means; and that an ill managed farm can no more be profitable than an empty factory. Men praise the bounty of nature. It is much safer to rely on her justice, which rarely fails to reward our care and avenge our neglect. Our farms, then, though small, are generally too large for our capitals; that is we work badly too much ground, instead of cultivating well a little. It is wonderful, indeed, how profusely a small spot of ground will reward good husbandry. There are in Italy hundreds and thousands of people, living on farms of from four to ten acres, and paying to the owner one third or one half of the produce. The whole straw for the Leghorn bonnets, by the exportation of which in a single year five hundred thousand dollars were gained, would grow on two acres. There are in Switzerland some hill sides, formed into terraces, which have sold for two thousand dollars an acre; and in fortunate spots for gardening, as near London, a single acre will yield a clear profit of from eight to nine hundred dollars a year. These examples may perhaps explain, how without the great capitals of England, and without diminishing our farms, we may gradually render them richer and more productive by judicious culture."

BARN YARDS AND STERCORARIES OR MANURE HEAPS.

The following humorous exposition of the faults of some farmers, as respects the economy of their barn yards and stercoraries, is extracted from an Address to the Massachusetts Agricultural Socicty, by the Hon. Josiah Quincy.

"As we proceed to the farm we will stop one moment at the barn yard. We shall say nothing about the arrangements of the barn. They must include comfort, convenience, protection, for his stock, his hay, and his fodder, or they are little or nothing. We go thither for the purpose only of looking at what the learned call the stercorary, but which farmers know by the name of the manure heap. What is its state? How is it located? Sometimes we see the barn yard on the top of a hill, with two or three fine rocks in the centre; so that whatever is carried or left there, is sure of being chiefly exhaled by the sun or washed away by the rain. Sometimes it is to be seen in the hollow of some valley, into which all the hills and neighboring buildings precipitate the waters. Of consequence all its contents are drowned or water soaked, or what is worse, there having been no care about the bottom of the receptacle, its wealth goes off in the under strata, to enrich possibly the antipodes.

"Now all this to the last degree is waseful, absurd and impoverishing. Too much cannot be said to expose the loss and injury which the farmer thus sustains. Let the farmer want whatever else he pleases—but let no man call himself a farmer, who suffers himself to want a receptacle for his manure, water-tight at the bottom, and covered over at the top, so that below nothing shall be lost by drainage; and above, nothing shall be carried away by evaporation. Let not the size of this manure heap be any objection. If it be great, he looses the more, and can afford the expense better. If it be small, this is the best way to make it become greater. Besides, what is wanted? An excavation, two or three feet deep, well clayed, paved and "dishing," as it is called, of an area from six to thirty feet square, according to the quantity of the manure; over head a roof made of rough boards and refuse lumber if he pleases."

CURE FOR THE BITE OF THE RATTLESNAKE OR OTHER VENOMOUS ANIMAL.

We have had the pleasure of a conversation with Dr. Joseph Moore, of Gibsonport, Miss. who informs us that during eighteen years residence in that climate, there have come under his particular care thirteen cases of the bite of the rattlesnake and moccasin, (the latter of which is more venomous than the rattlesnake) and that he has found the following a certain and immediate cure. The remedy was introduced into Europe from Asia, by Sir William Jones, and has the confidence of the medical faculty, wherever it has been applied.

Give to a grown person a teaspoonful of the volatile spirit of sal ammoniac, or what is commonly called spirits of hartshorn, in half a wine glass of water, every half hour, until the symptoms disappear, binding at the same time a linen cloth, of three or four thicknesses, wet with the spirits, unmixed with water, to the wound; the cloth to be wetted in the spirits every five minutes.

If the wound has been given some hours before the application can be applied, it should be scarified freely round the bite with a sharp knife or lancet, before the wet cloth is laid on.

The most severe and obstinate cases have been known to yield to this remedy in a few hours.

Very great care ought to be taken that the spirits of hartshorn should be kept tightly corked; for, if exposed to the air, it soon loses its efficacy.—*Village Record.*

EFFECTUAL CURE FOR THE CHOLERA MORBUS.

Take four ounces of chipped log wood, and one ounce of cinnamon, put them in three pints of water, and boil them down to a pint and a half; then strain it and add a pint of brandy, and four ounces of loaf sugar; then simmer it over a slow fire for a short time, and then put it up for use. For a grown person take a table spoonful, and a child a tea spoonful. Our informer, a respectable gentleman from Upper Marion Township, Pennsylvania, states that it has been used in his family, also by several of his neighbors, and in every instance it has been found to give almost immediate relief.

Philadelphia Union.

A correspondent informs us that if land is infested with white weed, it will be effectually destroyed in two years by pasturing sheep on it.

* See American Farmer, May 3, 1822.

Candles with wooden wicks.—A writer in the Aurora, states the result of an experiment he has made with wood for the candle wick. The wood was of a cypress shingle, split to the size of a rye straw and made round, so that the coat of cotton which was applied, might be more easily put on by rolling the stick upon a card which contained the cotton, and which had been previously well carded. The candle with the wooden wick lasted 7 hours while one of the same size, (six to the pound) with cotton wick lasted but 5 hours. Agreeably to this experiment, a pound of candles will last forty-two hours, when they would only last thirty made the usual way.

SAIL CLOTH.—We are pleased to be able to announce the successful establishment of a manufactury of Sail Cloth, on a new and improved principle at Stoneham, near this city, by a Mr. JOHNSON. Bolts of different numbers of Mr. J's manufacture have been sent for inspection to the Charlestown Navy Yard, whose fabric has been declared by competent judges, to be decidedly superior, in beauty and strength, to any article of this kind ever exhibited in the U. States.—*Boston Statesman.*

WOOL.—A correspondent informs us, that from January 1st to June 30th, of the present year, there has been imported into this District from foreign ports, *one hundred and ninety seven thousand nine hundred and four pounds* of WOOL. A very sound reason for our farmers to grow more of that useful article, as it will command readily the money, from thirty-two to sixty cents per pound.—ib.

The Long Island Farmer states, that eleven pounds of well washed fine white wool was sheared, a few days since, from a merino buck belonging to Mr. James Scott.—*N. Y. Gazette.*

Canada Thistle.—Mr. Butler states from his own experience, for the information of farmers and agriculturists, that if the Canadian thistle is cut down in this month it will decay, for these reasons: the seed will be rendered abortive, and the stock, which is hollow, will fill with water and destroy the plant.

Ulster Plebeian.

Easy cure for the Ague.—When the fit is on, take a new laid egg in a glass of brandy, and go to bed immediately. This very simple receipt has cured a great many, after many celebrated preparations have proved unsuccessful.

Arsenic.—A man, says an English paper, was poisoned in a very singular manner. His physician prescribed for him a dose of arsenic and sent it to a druggist to be put up. The druggist having adjusted his scales with the proper weights, turned to get the arsenic; while in the act of getting it, a worm or catterpillar crawled up the scales in which the weights were, and in this situation added its own weight, which occasioned the dose to be too large, and thus destroyed the patient.

Dense Population.—At Pawtucket, near Providence, on an area of from eighty to ninety acres of land, there are *three hundred and seventy seven* families, and *two thousand three hundred and ninety three* individuals.

THE FARMER.

BOSTON:—SATURDAY, AUG. 24, 1822.

A friend to our establishment, and a member of the Massachusetts Agricultural Society, having suggested to us the propriety and probable utility of republishing the notice of the Cattle Show, List of Premiums, &c. with which this number commences, we have given it a place to the exclusion of some other articles intended for this day's paper. We are happy in being in any degree instrumental in furthering the views of the Society; and those to whom our first article conveys nothing *new*, will excuse its republication when they are informed that we have distant subscribers, who, probably have not seen the list of premiums, and who, perhaps, may yet be induced to become competitors for those rewards, with which the bounty of the government and the liberality of the Trustees of the Society propose to remunerate superior skill and industry in the various departments of Agriculture and Domestic Manufactures.

COOKING FOOD FOR CATTLE.

(Continued from page 23.)

A great advantage which results from preparing food for cattle by steaming or boiling is obtained by its converting *water* into *solid food.* This may appear incredible to those who have either not thought at all, or thought somewhat superficially on the subject. A few grains of reflection, however, together with a spice or two of philosophy, may serve to shew that water is capable of affording a great deal of nutriment either in a liquid or solid form. We pass over the fact that some *plants* will grow with no other nourishment than what is afforded by water and air, and proceed to shew that much nutriment for animals may be obtained from water, when combined with other substances, by the agency of heat.

It is a fact, which will be acknowledged as soon as suggested, that a pound of Indian meal, or of rice, when boiled, gives more nourishment to man, or beast, than several pounds in a raw state. Count Rumford says, "From the result of actual experiment, it appears that for *each pound* of Indian meal employed in making hasty pudding, we may reckon *three pounds nine ounces* of the pudding."* And again: "Three pounds of Indian meal, three quarters of a pound of molasses, and one ounce of salt, having been mixed with five pints of boiling water, and boiled six hours, produced a pudding which weighed *ten pounds and one ounce.*"† The gain of weight in boiling rice is still greater. Now it is evident that these dishes must contain much more nourishment, as well as more substance, after having been cooked than could have been derived from their materials, if swallowed in a raw state.

But we will give another example to show that water is not only capable of being converted by heat into solid nutriment, but may even be made to compose a constituent part of sugar, one of the most nutritious of all substances. It is remarked by De Saussure, that "As starch boiled in water with sulphuric aid, and thereby changed into Sugar, increases in weight without uniting with any sulphuric aid or gas, or without forming any gas, we are under the necessity of ascribing the change *solely to the fixation of water.* Hence we must conclude that *Starch sugar is nothing else than a combination of starch with water in a solid state.* The sulphuric acid is not decomposed, or united to the starch as a constituent.* Should any person still doubt whether water can exist in a solid state, combined with other bodies, let him take the trouble to weigh a small quantity of quick lime, then slack it with water, and mark the increase of its weight. If then *solid nourishment* can be obtained from water by any cheap and practicable process, that husbandman must be blind to his own interest who omits to make use of such process.

Having thus as we conceive settled the point that it is good economy to steam or boil food for cattle, we will now attend to some inquiries respecting the best mode of executing such processes. Our observations will be plain and practical; and should we fail to point out the best methods of effecting our object, we may perhaps be of service by directing the attention of others to the subject, who may be more capable of its investigation.

We are not fully acquainted with all the improvements in producing steam for steam engines and other purposes. We shall however advert to some inventions of the kind which appear to us simple, as well as ingenious, and perhaps superior to the means generally employed for similar uses.

A boiler invented by Count Rumford, and presented to the French National Institute, is described in Aikin's Atheneum. The *substance* of the description is as follows.

This boiler was made on a small scale, being a copper cylinder only twelve inches in diameter, and as many in height, closed at top and bottom with circular plates. From the bottom seven tubes projected downward, each nine inches long, and three inches across, open next the cavity of the boiler and closed at their further extremities. From the top of the boiler a short tube arose six inches in diameter, and three inches high, shut at the top by a copper plate, through which passed one tube for the safety valve, another to convey the steam when wanted, and a third to admit water from the reservoir to supply the evaporation. This last tube passed downwards to within an inch of the bottom plate, where it was furnished with a floating ball, that was so placed as to keep the water six inches deep in the cavity of the boiler above that in the tubes.† The furnace in which this boiler was placed was of sheet iron, three inches high, and seventeen inches in diameter, lined with masonry, which is not particularly described; but as the grate is mentioned to be but six inches in diameter, it is probable that the cavity of the fire-place was of a conical shape from it to the bottom of the seven tubes.

Count Rumford reports that the boiler exceeded his expectations; he supposes that a boiler made in this form would have more strength in proportion to the surface exposed to the same internal pressure than one in the

* Rumford's Essays, vol. 1, p. 258, Boston edition.

† Rumford's Essays, p. 261.

* See a Treatise on Manures, printed in the same volume with Sir Humphrey Davy's Agricultural Chemistry, Phfladelphia edition.

† This contrivance is probably the same, or bears some analogy to what Mr. Smith calls the "self-supplying valve, which is apt to get out of order." See our last No. page 23.

usual shape, and that it would be less liable to loss of heat from cold air coming in contact with its internal surface.

When a boiler of this kind is constructed on a large scale, the Count mentions that the seven descending tubes may be made of cast iron, and the rest of the boiler sheet iron or copper; and thinks that when of this construction, it will cost less than one of equal surface of the usual form.

A Mr. Lloyd obtained a patent in England for a boiler, which is described in substance as follows:

The bottom of Mr. Lloyd's boiler is introverted, so as to form a cavity, which would nearly hold as much as the boiler itself, if it were reversed; the sides of this cavity are somewhat conical, and from the top a pipe passes out at one side through the cavity of the boiler to the air; the whole boiler or kettle is surrounded by an external case, a little distant from it all round, closed at top, and having a small opening at the side to give vent to the smoke. The small pipe adds somewhat to the effect, but is not absolutely necessary. For large boilers the cavity at the bottom need not be so large in proportion as that described. If it rises into the boiler a third of its depth, it will probably be sufficient. The flame and radiant heat of the fuel is reverberated in all directions in the cavity of the hollow bottom, and must (says the inventor) have much more effect than what can be produced by its unconfined lateral action against the external sides of a number of upright tubes, however well arranged.

A patent for "a new method of applying fire for the purpose of heating boilers," &c. obtained in England by Mr. Thomas Rowntree, has the following description:

"For heating of coppers, boilers, furnaces, ovens and stoves, my fire place is much smaller than heretofore made use of for the same sized copper, boiler, furnace, oven or stove. Instead of placing my fire-place, according to the common practice, immediately under the boiler, or other vessel, I place it at the front side or end, as I see most convenient, in such a manner as to oblige the flame to rise in the front-side or end, and pass all round the vessel, &c. while at the same time it strikes the bottom of the vessel, &c. without suffering the flame to pass off in a flue, or flues, as it usually does in the common way, and by that means sending the heat into the flues instead of its being used where it ought to be, namely, on the vessels, &c.; this my method effectually prevents; for by means of a small perpendicular, or other opening into a box or trap, which I call a reservoir, and which I place horizontally or diagonally, as the situation may require, and is made of iron, brick, stone, or any other material capable of bearing heat, where a valve is placed, riding on centres or otherwise, and standing in a diagonal or other direction, as is found most convenient, the flame is returned or impeded in its progress to the chimney, and made to descend below the bottom of the vessel, and pass out at the bottom, top, or side of said box, trap, or reservoir, into the common chimney. This reservoir is placed between the vessel, &c. and the chimney. To the opening which admits the flame into the reservoir, are affixed, when necessary, sliders, registers or stops, which serve to increase or diminish the heat. The valve in the reservoir is for the same purpose in another degree, which more immediately appertains to increasing or diminishing the draught, which it does by moving the said valve into different positions, as the speed of the operation may require."*

The above described boilers, and method of applying heat to them, or something like them, may perhaps be found inexpedient for farmers, who perform their operations on a large scale. But for common use we believe a five pail kettle so called set in the common way and filled about half full of water, would fully answer the purpose. Steam at the temperature of boiling water, Mr. Smith thinks is best adapted to the purpose of steaming roots and other food for cattle. At this temperature, steam occupies about 1200 times the space of water; or one gallon of water reduced to steam of the same temperature with boiling water, will furnish 1200 gallons of steam. It is true that steam when it first begins to operate on roots and other cold raw substances must be somewhat rapidly condensed. But if the apparatus is tight, or if even a coarse thick cloth is thrown over the vessel in which the food is steamed, as recommended by the Complete Grazier, the whole will speedily become so much heated that the steam will be but slowly condensed, and of course the supply from the boiler need not be very copious. We cannot, therefore, see for what purpose connected with the steaming of any reasonable quantity of dry food for cattle, a boiler of 100 gallons capacity should be needed. In preparing liquid messes for cows giving milk, &c. by the agency of steam, its expenditure will be great, in consequence of its being condensed by contact with cold water. But that steam may be made a vehicle for conveying heat with very little waste by evaporation, has been proved by actual experiments. We shall cite one in this place. A letter from Mr. Robertson Buchanan, Civil Engineer, Glasgow, is published in Tilloch's Philosophical Magazine, vol. xxxviii, p. 76, from which the following is extracted. "A place of worship has been for a considerable time heated by steam on a most simple plan, so as to require little or no attendance, and *does not require any water whatever to be added to that first put into the boiler, above thrice in a winter.*" We believe in this case the furnace and boiler were placed without the building which was heated by the steam, and the steam was conveyed by suitable tubes from the boiler in metallic vessels or reservoirs placed in the apartment which was warmed by its agency; and the tubes and reservoirs were so arranged that when any part of the steam became condensed it ran back into the boiler.

* For further explanation of this method, see Willich's Domestic Encyclopedia, Art. BOILER; likewise Repertory of Arts, vol. xiv, p. 1, First Series.

(*Concluded in our next.*)

FARMER SUMMARY OF NEWS.

A late arrival from Gibraltar has brought intelligence from Spain to the 11th July. By this it should seem that things in that quarter wear a very menacing aspect. The population is divided into three parties, viz—The advocates for unmixed democracy—the sticklers for the old order of things, an absolute monarchy—and those who are friends to the present constitution, or a limited monarchy. On the return of the King from adjourning the Cortes, his carriage was beset by riotous assemblages, and his guards, being pelted with stones, fired on the assailants and compelled them to disperse.

The next day (July 1st) sanguinary scenes were anticipated, but nothing realized worse than menacing words and movements. But during the night four regiments of guards left their barracks, and encamped a league to the northward of Madrid. Many of their officers, and some privates, however, refused to accompany them, and joined a guard left in the Palace.—The seceders, amounting it is said to about four thousand, appointed a Frenchman, (whose name is not mentioned) leader, and took the road to the French frontiers, avowing themselves to be friends to absolute monarchy. They were followed by Gen. Morillo, an officer faithful to the constitution and existing form of government, who attempted to persuade them to return to Madrid to protect the King, and perform their other incumbent duties. This they refused to do, and in their turn attempted, in vain, to seduce him from his allegiance.

The King remained at Madrid, to which tranquillity had been restored. He is considered as the leader of the Constitutionalists, and has been called upon to put himself at the head of the militia and march against the guards. This step, which would be the commencement of a civil war, he does not appear to be prepared to take.

The following (says the Centinel) is an extract from a well-informed American gentleman in Gibraltar:

"*Gibraltar, July* 11.—We have very serious accounts from Madrid. The Anti-constitutional party are taking measures to reinstate the old order of things—an unlimited monarchy, privileged clergy, &c. The country is in a state of anxious disquietude, and much blood is about to be shed in civil strife. Spain is in a wretchedly forlorn condition, and her capitalists are getting their property out of jeopardy. Nearly a million of dollars have been remitted to this place within a fortnight."

A battle is said to have taken place between the Turks and Saliots, which lasted three days, in which the Turks were defeated with the loss of six hundred men taken, including fifty eminent Turks.

There seems to be no prospect of war between Russia and Turkey. On the contrary, a Vienna Gazette says, "We expect a declaration from the Emperor of Russia, by which he will detach himself from the Greek cause."

In France there has lately been some attempts to organize insurrections against the existing government. It does not appear, however, that they were successful.

A public dinner has been given at the city of London Tavern, to Don Francisco Zea, Vice President and Plenipotentiary of the Republic of Colombia.

The wheat harvest had commenced in England, previous to the date of the last intelligence, and is said to be very productive.

ON THE EVILS OF A MISCHIEVOUS TONGUE.

BY T. G. FESSENDEN.

Many have fallen by the edge of the sword, but not so many as have fallen by the tongue.
Eccl. Apoc. xxviii, 8.

Tho' millions the sword of the warrior has slaughter'd,
While fame has the homicide's eulogy rung;
Yet many more millions on millions are martyr'd—
Cut off by that cowardly weapon, the tongue.

One sword may be match'd by another as keen,
In battle the bold man a bolder may meet,
But the shaft of the slanderer, flying unseen
From the quiver of malice, brings ruin complete.

An *insolent tongue*, by a taunt or a gibe,
Enkindles heart-burnings and bloody affrays;
A *treacherous tongue*, when impell'd by a bribe,
The guiltless condemns, or a nation betrays.

A *smooth subtle tongue* vile seducers employ
The fair sex to lure to libidinous thrall;
A *slip of the tongue* may its owner destroy,
And *the tongue of the serpent* occasion'd the fall.

Then be it impress'd on Columbian youth,
That the tongue is an engine of terrible force;
Not govern'd by reason, not guided by truth,
A plague, which may desolate worlds in its course.

From the New York Statesman.

ON THE WILD INDIGO PLANT.

Messrs. Editors,

While we are anxiously copying the manipulations of European artists in our dyehouses, we are neglecting to use an indigenous plant, far more valuable than any thing contained or used in Europe. Our blue dyers began with the ash vat, described by Berthollet, and others, and which Dr. Bancroft informs us, "is so costly, as to be chiefly employed to dye silk." If this were the only objection, it would in itself be sufficient to induce an alteration; but when in addition to this we know that the color is not so bright, or so permanent, as when indigo is fermented by some vegetable basis, containing in itself the primitive coloring matter, we shall be much surprised that this mode of dying has been so long continued.

The plant used by Europeans from time immemorial, to ferment their blue vats, has been the isatis, or woad, which is indigenous in England and other parts of Europe. It is not surprising, therefore, that it should be used there, as nothing better offered itself; but in the U. States we have the wild indigo plant, growing abundantly every where, that possesses all the valuable fermentative properties of woad, with twenty times as much coloring matter, and giving a tint that for permanency and brilliancy is unrivalled.

"It is well known, according to Mr. Clarkson, that the African dyes are superior to those of any other part of the globe.

"The blue is so much more permanent and beautiful than that which is extracted from the same plant in other parts, that many have been led to doubt whether the African cloths brought into this country (England) were dyed with indigo or not. They apprehended that the colors in these, which became more beautiful upon washing, must have proceeded from another weed, or have been an extraction from other weeds which are celebrated for dying there—The matter, however, has been clearly ascertained; a gentleman procured two or three of the balls, which had just been prepared by the Africans for use; he brought them home, and upon examination found them to be the leaves of indigo rolled up in a very simple state."

Having noticed the above article in Dr. Bancroft's incomparable work on permanent colors, I was induced last fall to collect some of the plant, not with an intention of coloring with it, as I had no means of preparing for that purpose, but to use the woad vats in place of swill from bran and madder, to asist their fermentation, which were weak, owing to the woad being of an inferior quality. I gathered nearly a cart load, too late in the season to obtain it in maturity, and had it boiled, and used the liquor when wanting. The plants were too old to retain much of those succulent juices in which their value chiefly consists, yet it answered the intended purpose, for the liquors so long as I was enabled to supply them with it, worked much freer and more vigorous, than in the usual way, and although this experiment was not decisive, for want of a sufficient quantity, and from the plant being too old when gathered, yet I am convinced by the effect produced that it may be used to great advantage.

As the indigofera is found every where in the United States, and in many places in great abundance, it would seem desirable that some experiments should be made on it, to test the superiority attributed to it, of which there appears but little room for doubt; for if this were established it would become an object of great national importance, inasmuch as the color made from it, would be superior to those obtained from Europe, and thereby give to American fabrics the preference in color in which they are now decidedly deficient.

I apprehend the balls are made by simply placing the leaves together, face ways, as they are gathered; that when a ball is made, it ferments, and exudes sufficient moisture, to cause an adhesion of the mass; and that this process developes the coloring matter, so as to enable the vat liquor to extract it with sufficient facility. This is not the only mode of preparing the plant. The following extracts will prove there is considerable latitude, both in preparing and in working it afterwards.

Capt. G. Roberts, in the account of his voyages, mentions "the indigo plant as growing wild at Bonavista; and that the natives prepare it, only by pounding the leaves of the shrub while green, in a wooden mortar, with a wooden pestle, and to reduce it to a kind of pulp, which they form into thick round cakes, or balls, and drying it, keep it till they have occasion to use it for dying their clothes." Mr. Mungo Park, in the account of his travels in Africa, says, "that to dye cloth of a lasting blue color, according to the practice of the negro women, the leaves of the indigo when fresh gathered, are pounded in a wooden mortar, and mixed in a large earthen jar, with a strong ley of wood ashes, (chamberley being sometimes added) and the cloth is steeped in this mixture, and allowed to remain until it has acquired a proper shade. When indigo is most plentiful, they collect the leaves and dry them in the sun, and when they wish to use them, they reduce a sufficient quantity to powder, and mix it with ley as before mentioned."

Mr. Marsden, in his history of Sumatra, says "the indigo shrub (Yaroom) is always found in their plantations; but the natives, to dye with it, leave the stalk and branches for some days in water to soak, then boil it, and with their hands, work some quick lime among it, with the leaves of the pacoo sabba for fixing the color. They then drain it off, and use it in a liquid state."

Other extracts might be added, confirming the good qualities of this plant, but I think enough has been made to convince the most incredulous reader, that if a sufficient supply of the dried leaves could be obtained at that price, it might be rendered, when manufactured ready for use, at less than the first cost of woad in England. By this means the American dyers could be supplied with a native article now considered as useless, equal to woad as a fermentative medium, containing twenty times as much coloring matter, more permanent than manufactured indigo, and giving a color unequalled by any other plant, or process.

HOPSON.

Cleanliness.—Aristotle ranks cleanliness as a minor virtue; and Addison not only recommends it as a proof of refinement, and as the means of conciliating esteem, but considers it as having some analogy to purity of heart. To the opinions of these good judges in morals we may add, that it holds a place amongst the charms of social life, whilst it is, at the same time, the greatest preservative of health.

Value of Time.—The difference of rising every morning at *six* and *eight* o'clock, in the course of forty years, supposing a person to go to bed at the same time he otherwise would, amounts to 29,200 hours, or *three* years, 121 days, and 19 hours, which afford eight hours a day for exactly *ten years*, so that it is the same as if ten years of life, (a weighty consideration) were *added*, in which we may command eight hours every day for the cultivation of our lives and the despatch of business.

It is a mortifying reflection, says Dr. Johnson, for any man to consider what he has done, compared with what he might have done.

"Mr. P." said a citizen, "has a vast deal of wit." "Very probable," said another, "and he seems determined to keep his stock good, for he never was known to expend or to make use of any."

Sir Thomas Overbury observes, that the man who has nothing to boast of but his illustrious ancestors, resembles a potatoe—the only good belonging to him being under ground.

Dinner Time.—A person asked a Grecian philosopher what he thought was the proper time to dine. "Sir," said the ancient, "the proper time of dinner, with the opulent, is when they choose; with the poor man, when he *can*."